

**School of Physics**  
**Gangadhar Meher University, Sambalpur**

**Proceedings of Board of Studies (BOS) Meeting of date 27.09.2024**

A BOS meeting for the School of Physics was held on Dt.27.09.2024 in Room No-11. The agenda of the meeting was to finalize the syllabus and courses for the implementation of NEP.

The following resolution were taken

1. Semester wise arrangement of all courses were decided from the model syllabus provided by the HEI Odisha.
2. All Core-1, Core-2 and Core-3 papers were decided from the list provided by HEI Odisha.
3. MDC(Multidisciplinary), skill enhancement (SEC) and value added course (VAC) for semester I and semeste II are taken from the basket of the model syllabus.
4. The following new VAC courses are proposed by the faculties of School of Physics.
  - (a) Advanced Forensic Science
  - (b) Vacuum technology and Application
  - (c) Basic Instrumentation courses in Physics
  - (d) Comsol
  - (e) Python for Science and EngineeringBoS approve all the proposed VAC.

5. In Semester IV a project is added as an alternative option for community engagement/field work/internship to facilitate applied based knowledge.
6. In the community engagement/field work/internship/Project a student has to submit a report with a power point presentation.
7. The BOS approve the following MDC courses in various semesters for 2024-25 and onwards batches

Semester	Name of the MDC Courses
Semester-I	Physics
Semester-II	Numerical Method/Bio-Physics
Semester-III	Nano Material and Application/Introduction to Spectroscopy

8. The BOS approve the following SEC courses in various semesters for 2024-25 and onwards batches

Semester	Name of the SEC Courses
Semester-II	Type setting Latex
Semester-V	Renewable energy and Energy harvesting/Yoga in everyday life
Semester-VI	Applied Optics and Photonics/Mushroom Cultivation

9. VAC for Semester-III, V and VI will be taken BOS (Physics) approved courses as well as from the model syllabus proposed by HEI. The VAC for the Semester-I- will be Environmental Studies and Disaster management as decided by the model syllabus.



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10. Detail syllabus for semester I and semester II are appended at the end of the BOS proceeding. The detail content for the courses of semester III, IV, V and VI will be proposed in the forthcoming BOS.

### **New Courses Introduced:**

#### **Semester-I**

MDC- Physics

VAC- Environmental Studies and Disaster Management

#### **Semester-II**

MDC- A. Numerical Method

B. Bio-physics

SEC- Type Setting in Latex

#### **Semester-III**

Core-1- Electromagnetic Theory

MDC- A. Nanomaterial and Applications

B. Introduction to Spectroscopy

#### **Semester-IV**

Community Engagement/Field Work/Internship/ Project

#### **Semester-V**

SEC- A. Renewable Energy and Energy Harvesting

B. Yoga in Everyday life

#### **Semester-VI**

Core-1- Nuclear And Particle Physics


SEC-A. Applied Optics and Photonics

B. Mushroom Cultivation

### **New Value Added Courses are introduced**

1. (a) Environmental Studies and Disaster management.  
(b) Organic farming  
(c) Vermicompost  
(d) Latex for Scientific and Research documentation preparation  
(e) Scilab for Scientist and Engineers  
(f) Python for Scientist and Engineers  
(g) Statistical Approach to Research Methodology
2. VAC suggested by the Faculties of School of Physics  
(a) Advanced Forensic Science  
(b) Vacuum technology and Application  
(c) Basic Instrumentation courses in Physics  
(d) Comsol  
(e) Python for Science and Engineering


The Value Added Courses suggested by the faculties will be offered to students only after it is approved by the HEI.

  
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Whole Structure of the NEP UG Syllabus of 3 years is given below

Semester-I			
Course code	Name of the Course		Credit
Core -I	P1 : Mathematical Physics -I		4
	P2: Mechanics		4
Core -II	Mechanics		4
MDC	Physics		3
AECC	Odia/Hindi/ Sanskrit		4
VAC	Environmental Studies and disaster management		3
<b>Total Credit</b>			22
Semester-II			
Core -I	P1 : Electricity and Magnetism		4
	P2: Mathematical Physics -II		4
Core -III	Electricity and Magnetism		4
MDC	Numerical Method/Bio-Physics		3
AEC	English		4
SEC	Type Setting in Latex/Introduction to Python		3
<b>Total Credit</b>			22
Semester-III			
Core -I :	P1 : Waves and optics		4
	P2: Mathematical Physics -III		4
	P3: Thermal Physics		4
Core -II	Thermal Physics		4
MDC			3
VAC	Nanomaterial and Applications/Introduction to Spectroscopy		3
<b>Total Credit</b>			22
Semester-IV			
Core -I	P1 : Analog System and applications		4
	P2: Classical Dynamics		4
	P3: Electromagnetic Theory		4
Core -II	Waves and optics		4
	Community engagement or field work or Internship or project		4
<b>Total Credit</b>			20
Semester-V			
Core -I	P1 : Quantum Mechanics and Applications		4
	P2: Solid State Physics		4
	P3: Digital Systems and Applications		4
Core -II	Elements of Modern Physics		4
SEC	Renewable Energy and Energy Harvesting/Yoga in Everyday life		3



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VAC	From the list		3
<b>Total Credit</b>			22
<b>Semester-VI</b>			
Core -I	P1 : Nuclear and Particle Physics		4
	P2: Statistical Mechanics		4
Core -III	Solid State Physics		4
SEC	Applied Optics and Photonics/Mushroom Cultivation		3
VAC	From the list		3
<b>Total Credit</b>			18

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**G.M. University, Sambalpur**

This BOS was attended by the following members.

1. Prof. S.K Das(Head & Chairman BOS) *S.K*

2. Prof. Banarji Behera(Professor, External Expert) *B.B*

3. Dr. Namita Shadangi( Asso. Professor, BOS Member) *NS*

4. Dr. Pramod Kumar Samal(Asso. Professor, BOS Member) *PK Samal*

5. Dr. Pranati Purohit (Asst. Professor, BOS Member) *Pranati*

6. Dr. Ananta Prasad Chakraverty (Asst. Professor,BOS Member) *A Chakraverty*

7. Dr. Gangadhar Behera (Asst. Professor,BOS Member) *GB*

8. Dr. Jasabanta Sekhar Hansdah (Asst. Professor, BOS Member)

*Jasabanta Sekhar Hansdah*

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GPS MARK

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